

Table 1
NovaAir Strato Series - Area Coverage *

8 Foot Ceiling	10 Foot Ceiling	12 Foot Ceiling	Hourly Air Changes
1,380 Sq. Ft.	1,104	920	2
920	736	613	3
690	552	460	4
552	442	368	5
460	368	307	6
394	315	263	7

* Fan performance calculations include unit air resistance losses resulting in a 368 cubic feet per minute effective air volume at maximum speed with 120 volt 60 Hz electrical power.

Table 2

**NovaAir Strato Series One
Pathogen Inactivation Percentage¹**

Pathogen	Percent Inactivation²
<i>Serratia marcescens</i>	87.8716 - 99.9806
<i>Escherichia coli</i>	56.5885 - 99.9984
<i>Staphylococcus aureus</i>	92.5966 - 99.9963
<i>Streptococcus pyogenes</i>	100
<i>Pseudomonas aeruginosa</i>	70.8029 - 100
<i>Legionella pneumophila</i>	99.7557 - 99.936
<i>Adenovirus</i>	79.896
<i>Vaccinia (Poxvirus)</i>	98.8774
<i>Coxsackie virus</i>	96.1439
<i>Influenza A virus</i>	96.9427
<i>Echovirus</i>	99.9865
<i>Reovirus Type 1</i>	99.5629
<i>Mycobacterium tuberculosis</i>	86.8703 - 99.8097
<i>Corynebacterium diphtheriae</i>	86.558
<i>Moraxella-Acinetobacter</i>	0.585915
<i>Haemophilus influenzae</i>	85.4482
<i>Bacillus anthracis (mixed)</i>	77.5872
<i>Bacillus anthracis spores</i>	90.2988
<i>Bacillus subtilis spores</i>	61.4022
<i>Penicillium expensum spores</i>	40.5515
<i>Mucor racemosus spores</i>	32.7435
<i>Penicillium italicum spores</i>	30.9412
<i>Fusarium oxysporum spores</i>	28.0413
<i>Cryptococcus neoformans spores</i>	25.8956
<i>Penicillium digitatum spores</i>	19.0671
<i>Aspergillus niger spores</i>	18.8528
<i>Fusarium solani spores</i>	18.829
<i>Aspergillus glaucus spores</i>	14.1687
<i>Cladosporium spores</i>	10.5644
<i>Scopulariopsis spores</i>	8.16783
<i>Rhizopus nigricans spores</i>	5.9837
Blue-green algae	1.34248

1 - Results from device modeling performed by UltraViolet Devices, Inc., March 2001.

2 - When range of percentages shown, higher value for airborne pathogen inactivation.
Where single percentage shown, pathogen inactivation percentage based on petre dish inactivation data.

Table 3**NovaAir Strato Series Two
Pathogen Inactivation Percentage⁻¹**

Pathogen	Percent Inactivation⁻²
<i>Serratia marcescens</i>	90.0844 - 99.9914
<i>Escherichia coli</i>	59.9133 - 99.9994
<i>Staphylococcus aureus</i>	94.226 - 99.9986
<i>Streptococcus pyogenes</i>	100
<i>Pseudomonas aeruginosa</i>	74.0411 - 100
<i>Legionella pneumophila</i>	99.8624 - 99.9683
<i>Adenovirus</i>	82.7514
<i>Vaccinia (Poxvirus)</i>	99.2688
<i>Coxsackie virus</i>	97.1742
<i>Influenza A virus</i>	97.8087
<i>Echovirus</i>	99.9942
<i>Reovirus Type 1</i>	99.7398
<i>Mycobacterium tuberculosis</i>	89.1841 - 99.8954
<i>Corynebacterium diphtheriae</i>	88.902
<i>Moraxella-Acinetobacter</i>	0.641682
<i>Haemophilus influenzae</i>	87.8944
<i>Bacillus anthracis</i> (mixed)	80.5698
<i>Bacillus anthracis</i> spores	92.2361
<i>Bacillus subtilis</i> spores	64.756
<i>Penicillium expensum</i> spores	43.4316
<i>Mucor racemosus</i> spores	35.2432
<i>Penicillium italicum</i> spores	33.3398
<i>Fusarium oxysporum</i> spores	30.2672
<i>Cryptococcus neoformans</i> spores	27.9862
<i>Penicillium digitatum</i> spores	20.6856
<i>Aspergillus niger</i> spores	20.4555
<i>Fusarium solani</i> spores	20.4299
<i>Aspergillus glaucus</i> spores	15.4118
<i>Cladosporium</i> spores	11.5128
<i>Scopulariopsis</i> spores	8.91197
<i>Rhizopus nigricans</i> spores	6.53599
Blue-green algae	1.46972

1 - Results from device modeling performed by UltraViolet Devices, Inc., March 2001.

2 - When range of percentages shown, higher value for airborne pathogen inactivation.

Where single percentage shown, pathogen inactivation percentage based on petre dish inactivation data.

Table 4**Energy Requirement for Microbial Inactivation with Ultraviolet Light**

Energy
(Microwatt-Seconds/Square Centimeter)

Bacteria

90%

99.99%

Bacillus anthracis *	4,520	8,700
Salmonella enteritidis *	4,000	7,600
Bacillus Megatherium sp. (veg.) *	1,300	2,500
Bacillus Megatherium sp. (spores) *	2,730	5,200
Bacillus paratyphosus *	3,200	6,100
Bacillus subtilis *	5,800	11,000
Bacillus subtilis spores *	11,600	22,000
Corynebacterium diphtheria *	3,370	6,500
Escherichia typosa *	2,140	4,100
Escherichia coli *	3,000	6,600
Micrococcus candidus *	6,050	12,300
Micrococcus sphaeroides *	10,900	15,400
Neisseria catarrhalis *	4,400	8,500
Phormonas turicensis *	4,400	8,500
Proteus vulgaris *	3,000	6,600
Pseudomonas aeruginosa *	5,500	10,500
Pseudomonas fluorescens *	3,500	6,600
Salmonella typhimurium *	8,000	15,200
Sarcina lutes *	19,700	26,400
Serratia marcescens *	2,420	6,160
Dysentery bacilli *	2,200	4,200
Shigella paratyphenteriae *	1,680	3,400
Spirillum rubrum *	4,400	6,160
Staphylococcus albus *	1,840	5,720
Staphylococcus aureus *	2,600	6,600
Streptococcus hemolyticus *	2,160	5,500
Streptococcus lactis *	6,150	8,800
Streptococcus viridans *	2,000	3,800

Yeast

Saccharomyces ellipsoideus *	6,000	13,200
Saccharomyces sp. *	8,000	17,600
Saccharomyces cerevisiae *	6,000	13,200
Brewers yeast *	3,300	6,600
Bakers yeast *	3,900	8,800

Mold Spores**Color**

Penicillium roqueforti *	Great	13,000	26,400
Penicillium expansum *	Olive	13,000	22,000
Penicillium digitatum *	Olive	44,000	88,000
Aspergillus glaucus *	Brown green	44,000	88,000
Aspergillus flavus *	Yellowish green	60,000	99,000
Aspergillus niger *	Black	132,000	330,000
Rhizopus nigricans *	Black	111,000	220,000
Mucor racemosus A *	White gray	17,000	35,200
Mucor racemosus B *	White gray	17,000	35,200
Oospora lactis *	White	5,000	11,000

Virus

Adenovirus Type III ***	4,500
Coxsackie A2 **	6,300
Infectious Hepatitis **	8,000
Influenza **	3,400
Rotavirus **	24,000
Poliomyelitis ***	21,000

* - Data acquired from Table II, Incident Energies at 2537 Å Radiation Necessary to Inhibit Colony Formation in 90% of the Organisms and for Complete Destruction, Application and Measurement of Ultraviolet Radiation by Rudolph Nagy of Westinghouse Electric Corporation and printed in the American Industrial Hygiene Association Journal, Volume 25, Pages 276, May-June 1964.

** - Data acquired from Dosage of UV-C in Microwatt sec/ square centimeter necessary for complete destruction, NQ Environmental, Inc., 1997.

Table 5

NovaAir Strato Series - Suggested Applications for Various Ranges of Hourly Air Changes

Ranges of Hourly Air Changes	Suggested Applications
2 to 2.5	Utility and storage rooms and areas that are lightly traveled.
2 to 4	Offices; government and other office complexes; businesses; schools; restaurants; hotels; and prisons detention areas.
3 to 7.5	Hospital and clinic hallways, reception, and administrative areas and patient rooms or wards; dentist and doctor offices; pharmacies and drug stores; laboratories; pathologist's diagnostic and office areas; and prison medical wards.